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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,411	01/15/2004	Soo-Min Byun	SEC.1096	3375

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RESTON, VA 20190

EXAMINER

KOCH, GEORGE R

ART UNIT	PAPER NUMBER
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1791

MAIL DATE	DELIVERY MODE
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12/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/757,411

Applicant(s)

BYUN ET AL.

Examiner

George R. Koch III

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-16 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-6 and 12-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/20/07.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. the originally filed specification makes no mention of "an interior mode signal" or "an interior/exterior mode switch", and only makes reference to an internal/external mode switch.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1, 4-6 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (Figure 1 and paragraphs 0003-0016 of the specification) in view of Kau (US 6,086,676).

As to claim 1 and 12, applicant's admitted prior art discloses a pad coating system (Figure 1), comprising: an ultraviolet (UV) source portion (item 22) comprising first control switches (items 1, 2, 3), the UV source portion irradiating UV light during a pad coating operation in response to a UV source open/close signal (signal SOC); a dispenser (item 24) comprising second control switches (items 4 and 5), the dispenser dispensing a coating liquid during the pad coating operation in response to a coating condition designation signal (signal ADD); and a prober (item 10) generating the UV source open/close signal and the coating condition designation signal, which controls the pad coating operation (via controller 12). Applicant's admitted prior art discloses that the pad coating system further comprises an input/output portion (item 20), which transmits and receives data to and from the controller.

Applicant's admitted prior art does not disclose that the UV source portion outputs first signals indicative of respective operative states of the first control switches, or that the dispenser outputs second signals indicative of respective operative states of the second control switches, or that the prober stops the pad coating operation in response to the first and second signals, although the admitted prior art discloses that errors due to improperly set switches are known (see paragraph 00015), or an interrupt signal generating circuit

Essentially, applicant's admitted prior art does not disclose an interlock system which shuts off the control signals from the prober whenever switches 1, 2, 3, 4 or 5 are set to the wrong state.

However, interlock switches are well known in microelectronics manufacturing apparatus. Kao discloses that semiconductor manufacturing devices frequently have multiple operating parameters and functions, and that interlock signals are utilized to prevent certain functions or conditions (see column 1, lines 27-58). Kao discloses an interrupt signal generating circuit (see Figures 4A-4D) which generates an interrupt signal in response to the first and second signals, and it would have been obvious to connect these signals to the admitted prior controller which stops the pad coating operation in response to the interrupt signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the generic interlock system and signals of Kao with the apparatus of the admitted prior art in order to prevent certain undesirable functions or conditions.

As to claim 4, Kao as incorporated discloses a first interrupt signal generating circuit which generates a first interrupt signal in response to the first signals and a second interrupt signal generating circuit (Kao's generic system allows for multiple interlocks - see for example, column 8, lines 46-65) which generates a second interrupt signal in response to the second signals, and it would have been obvious to connect these signals to the admitted prior controller which stops the pad coating operation in response to the interrupt signal.

As to claim 5 and 13, applicant's admitted prior art discloses that the first control switches include a shutter open/close switch (item 1) which opens and closes a shutter to enable UV irradiation, a time/manual mode switch which sets a UV irradiation time either automatically

or manually (item 2), and a UV lamp switch turns on and off a UV lamp (item 3). See also paragraph 0008.

As to claim 6 and 14, applicant's admitted prior art discloses that the second switches include an internal/external mode switch which sets pad coating conditions either automatically or manually, and a time/manual mode switch which sets a coating time either automatically or manually.

As to claim 15, Applicant's admitted prior art discloses that the pad coating system further comprises an input/output portion (item 20), which transmits and receives data to and from the controller.

As to claim 16, Kao as incorporated discloses that presenting an alarm and error message in response to the interrupt (see column 8, lines 2--45; see also columns 9-10)

Response to Arguments

4. In response to applicant's argument that Kao does not disclose pad coating, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

5. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the

time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

6. In this case, the knowledge is gleaned from the same art as applicant - interrupt signals and control operations in microelectronic manufacturing. Since Kao and the admitted prior art are in the same field of invention, and concern approaches to similar problems, it would have been obvious to combine the teachings of the two.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230

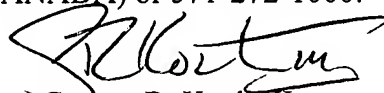
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(TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-866-377-8642 and giving the operator the above TDD number. The examiner can also be reached by E-mail at george.koch@uspto.gov in accordance with MPEP 502.03. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Tucker can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


George R. Koch III
Primary Examiner
Art Unit 1734

GRK
12/10/2007